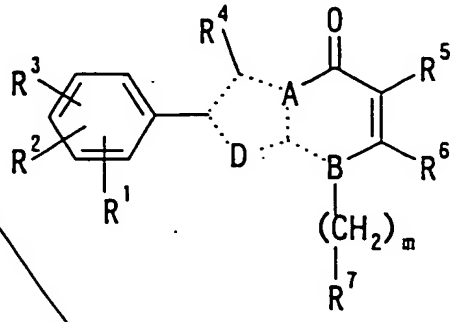
CLAIMS

1. A compound of the formula (I):



wherein one of A and D represents a nitrogen atom and the other represents a carbon atom, or both represent a nitrogen atom;

B represents a nitrogen atom or a carbon atom;

m represents an integer from 0 to 3;

R^1, R^2 and R^3 each represents (i) hydrogen or (ii) a group bound via a carbon atom, a nitrogen atom, an oxygen atom or a sulfur atom;

R^4 represents a group bound via a carbon atom;

R^5 represents (i) hydrogen, (ii) halogen or (iii) a group bound via a carbon atom or an oxygen atom;

R^6 represents hydrogen or a group bound via a carbon atom;

R^7 represents a homocyclic group which may be substituted or a heterocyclic group which may be substituted; and

each dotted line represents a single bond or a double bond, or a salt thereof.

2. A compound of claim 1 or a salt thereof, wherein

R^1, R^2 and R^3 each is (1) hydrogen,

(2) a hydrocarbon group which may be substituted,

(3) an acyl group which may be substituted,

(4) a heterocyclic group having a bond in a carbon atom thereof which may be substituted,

(5) a group of the formula: $-COOR^{21}$ wherein R^{21} is hydrogen, a hydrocarbon group which may be substituted or a heterocyclic group which may be substituted,

(6) a group of the formula: $-CO-NR^{15}R^{16}$ wherein R^{15} is hydrogen, a hydrocarbon group which may be substituted or a C_{1-10} alkoxy group; and R^{16} is hydrogen or a hydrocarbon group which may be substituted; or R^{15} and R^{16} form, taken together with the adjacent nitrogen atom, a cyclic amino group which may be substituted,

(7) a cyano group,

(8) a nitro group,

(9) a group of the formula: $-NR^{8}R^{9}$ wherein R^{8} is (i) hydrogen, (ii) a hydrocarbon group which may be substituted, (iii) an acyl group which may be substituted, (iv) a group of the formula: $-O-R^{13}$ wherein R^{13} is hydrogen, a C_{1-10} hydrocarbon group which may be substituted, a C_{1-20} acyl group which may be substituted, a C_{1-20} alkylsulfonyl group which may be substituted, a C_{6-14} arylsulfonyl group which may be substituted or a heterocyclic group which may be substituted, (v) a heterocyclic group which may be substituted or (vi) a group of the formula: $-S(O)t-R^{12}$ wherein t is an integer from 0 to 2, and R^{12} is hydrogen or a C_{1-10} hydrocarbon group which may be substituted;

R^9 is hydrogen, a hydrocarbon group which may be substituted or an acyl group which may be substituted; or

R^8 and R^9 form, taken together with the adjacent nitrogen atom, a cyclic amino group which may be substituted,

(10) a group of the formula: $-O-R^{13}$ wherein R^{13} is as defined above, or

(11) a group of the formula: $-S(O)t-R^{14}$ wherein t is an integer from 0 to 2, and R^{14} is hydrogen, a hydrocarbon group which may be substituted or a heterocyclic group which may be substituted;

R^4 is (1) a hydrocarbon group which may be substituted,

(2) an acyl group which may be substituted,

(3) a heterocyclic group having a bond in a carbon atom thereof which may be substituted,

(4) a group of the formula: $-COOR^{21}$ wherein R^{21} is as defined above,

(5) a group of the formula: $-CO-NR^{15}R^{16}$ wherein each symbol is as defined above, or

(6) a cyano group;

R^5 is (1) hydrogen,

(2) halogen,

(3) a hydrocarbon group which may be substituted,

(4) an acyl group which may be substituted,

(5) a heterocyclic group having a bond in a carbon atom thereof which may be substituted,

(6) a group of the formula: $-COOR^{21}$ wherein R^{21} is as defined above,

(7) a group of the formula: -CO-$NR^{15}R^{16}$ wherein each symbol is as defined above,
(8) a cyano group, or
(9) a group of the formula: -O-R^{13} wherein R^{13} is as defined above;
R^6 is (1) hydrogen,
(2) a hydrocarbon group which may be substituted,
(3) an acyl group which may be substituted,
(4) a heterocyclic group having a bond in a carbon atom thereof which may be substituted,
(5) a group of the formula: -$COOR^{21}$ wherein R^{21} is as defined above,
(6) a group of the formula: -CO-$NR^{15}R^{16}$ wherein each symbol is as defined above, or
(7) a cyano group;
R^7 is (i) a C_{6-10} aryl or C_{3-7} cycloalkyl group, each of which may be substituted by 1 to 6 substituents selected from the group consisting of (1) C_{1-15} alkyl which may be substituted by 1 to 3 halogen, (2) C_{3-10} cycloalkyl, (3) C_{2-10} alkenyl, (4) C_{2-10} alkynyl, (5) C_{3-10} cycloalkenyl, (6) C_{6-10} aryl, (7) C_{7-20} aralkyl, (8) nitro, (9) hydroxy, (10) mercapto, (11) oxo, (12) thioxo, (13) cyano, (14) carbamoyl, (15) carboxyl, (16) C_{1-6} alkoxy-carbonyl, (17) sulfo, (18) halogen, (19) C_{1-6} alkoxy, (20) C_{6-10} aryloxy, (21) C_{1-6} alkanoyloxy, (22) C_{1-6} alkylthio, (23) C_{6-10} arylthio, (24) C_{1-6} alkylsulfinyl, (25) C_{6-10} arylsulfinyl, (26) C_{1-6} alkylsulfonyl, (27) C_{6-10} arylsulfonyl, (28)

amino, (29) C_{1-6} alkanoylamino, (30) mono- or di-C_{1-4} alkylamino, (31) C_{3-8} cycloalkylamino, (32) C_{6-10} arylamino, (33) C_{1-6} alkanoyl, (34) C_{6-10} aryl-carbonyl and (35) 5- to 6-membered heterocyclic group, or

(ii) a heterocyclic group which may be substituted,

in which "hydrocarbon group" is a C_{1-20} hydrocarbon group selected from C_{1-15} alkyl, C_{3-10} cycloalkyl, C_{2-10} alkenyl, C_{2-10} alkynyl, C_{3-10} cycloalkenyl, C_{6-14} aryl and C_{7-20} aralkyl;

"C_{1-10} hydrocarbon group" is a C_{1-10} alkyl, C_{3-10} cycloalkyl, C_{2-10} alkenyl, C_{2-10} alkynyl, C_{3-10} cycloalkenyl, C_{6-10} aryl or phenyl-C_{1-4} alkyl group;

"acyl group" and "C_{1-20} acyl group" each is formyl, C_{1-6} alkyl-carbonyl, C_{1-6} alkoxy-carbonyl, C_{6-14} aryl-carbonyl, C_{6-14} aryloxy-carbonyl, C_{6-14} aryl-C_{1-6} alkyl-carbonyl, C_{6-14} aryl-C_{1-6} alkoxy-carbonyl, C_{2-4} alkenyl-carbonyl, C_{3-6} cycloalkyl-carbonyl or tricyclic bridged C_{9-10} hydrocarbon-carbonyl;

"heterocyclic group" is (1) a 5- to 8-membered heterocyclic group containing 1 to 4 hetero atoms selected from oxygen atoms, sulfur atoms, nitrogen atoms in addition to carbon atoms, (2) a bi- or tri-cyclic condensed heterocyclic group resulting from condensation of 2 or 3 of the above (1) heterocyclic group, whether identical or not, or (3) a bi- or tri-cyclic

condensed heterocyclic group resulting from condensation of the above (1) heterocyclic group and 1 or 2 benzene rings;

"cyclic amino group" is a 5- to 7-membered cyclic amino group optionally containing 1 to 3 hetero atoms selected from oxygen atoms, sulfur atoms, nitrogen atoms in addition to carbon atoms and a nitrogen atom;

"substituent(s)" for the "hydrocarbon group which may be substituted", the "C_{1-10} hydrocarbon group which may be substituted", the "acyl group which may be substituted", "C_{1-20} acyl group which may be substituted", the "C_{1-20} alkylsulfonyl group which may be substituted" or the "C_{6-14} arylsulfonyl group which may be substituted" is selected from 1 to 6 of (1) halogen, (2) nitro, (3) nitroso, (4) cyano, (5)(i) C_{1-6} alkyl which may be substituted by 1 to 3 substituents selected from the group consisting of hydroxy, C_{1-6} alkoxy, C_{1-3} alkoxy-C_{1-3} alkoxy, C_{1-3} alkylthio, hydroxy-C_{1-3} alkoxy, C_{1-6} alkyl-carbonyl, carboxy, carbamoyl, C_{1-6} alkyl-carbamoyl, 5- to 8-membered heterocyclic group and halogen, (ii) C_{1-4} alkanoyl or C_{2-4} alkenoyl, (iii) C_{6-14} aryl-C_{1-6} alkyl which may be substituted by 1 to 3 substituents selected from the group consisting of halogen, C_{1-3} alkoxy and C_{1-4} alkyl, (iv) C_{6-14} aryl which may be substituted by 1 to 3 halogen, (v) C_{2-6} alkenyl, (vi) C_{3-7} cycloalkyl, (vii) C_{1-3} alkoxy-carbonyl,

(viii) mono- or di-C_{1-6} alkyl amino, (ix) C_{2-6} alkenyl amino, (x) C_{1-3} alkoxy-carbonyl, (xi) formyl or C_{1-6} alkyl-carbonyl, or (xii) hydroxy which may be substituted by C_{3-6} cycloalkyloxy-carbonyl, (6) a group of the formula: -S(O)t-R^{17} wherein t is an integer from 0 to 2, and R^{17} is (i) hydrogen or (ii) a C_{1-6} alkyl, C_{6-14} aryl or C_{7-20} aralkyl group which may be substituted by 1 to 3 substituents selected from the group consisting of halogen, nitro, cyano, hydroxy, oxo, thioxo, carboxy, cyano-C_{6-14} aryl and halogeno-C_{6-14} aryl, (7) a group of the formula: -$NR^{18}R^{19}$ wherein R^{18} and R^{19} each is hydrogen, C_{1-6} alkyl, C_{1-6} alkylamino-C_{1-6} alkyl, C_{1-6} alkoxy, C_{2-6} alkenyl, C_{3-7} cycloalkyl, phenyl, phenyl-C_{1-6} alkyl, C_{1-6} alkanoyl, C_{3-6} alkenoyl, C_{4-7} cycloalkyl-carbonyl, phenyl-C_{1-6} alkyl-carbonyl, C_{1-6} alkoxy-carbonyl, phenyl-C_{1-6} alkoxy-carbonyl or 5- to 8-membered heterocyclic group, (8) a group of the formula: -CO-R^{20} wherein R^{20} is (i) hydrogen, (ii) hydroxy, (iii) C_{1-10} alkyl or (iv) C_{1-6} alkoxy which may be substituted by C_{6-14} aryl which may be substituted by 1 to 3 substituents selected from the group consisting of halogen and nitro, (v) C_{3-6} cycloalkyl, (vi) C_{6-14} aryl, (vii) C_{6-14} aryloxy, (viii) C_{7-20} aralkyl, (ix) a group of the formula: -$NR^{10}R^{11}$ wherein R^{10} is hydrogen, a C_{1-10} hydrocarbon group which may be substituted, a C_{1-20} acyl group which may be substituted, a group of the

formula: -O-R^{13} wherein R^{13} is as defined above, a heterocyclic group which may be substituted or a group of the formula: -S(O)t-R^{12} wherein each symbol is as defined above; and R^{11} is hydrogen or a C_{1-10} hydrocarbon group; or R^{10} and R^{11} form, taken together with the adjacent nitrogen atom, a cyclic amino group which may be substituted, or (x) 5- to 8-membered heterocyclic group, (9) 5- to 8-membered heterocyclic group which may be substituted by 1 to 3 substituents selected form the group consisting of hydroxy, amino, mono- or di-C_{1-4} alkylamino, C_{1-4} alkoxy, halogen, nitro and C_{1-6} alkyl, (10) sulfo, (11) C_{6-14} aryl which may be substituted by 1 to 3 substituents selected form the group consisting of hydroxy, amino, mono- or di-C_{1-4} alkylamino, C_{1-4} alkoxy, halogen, nitro and C_{1-6} alkyl, (12) C_{3-7} cycloalkyl which may be substituted by 1 to 3 substituents selected form the group consisting of hydroxy, amino, mono- or di-C_{1-4} alkylamino, C_{1-4} alkoxy, halogen, nitro and C_{1-6} alkyl, (13) C_{1-6} alkylenedioxy, (14) oxo, (15) thioxo, (16) C_{2-4} alkynyl which may be substituted by 1 to 3 substituents selected form the group consisting of hydroxy, amino, mono- or di-C_{1-4} alkylamino, C_{1-4} alkoxy, halogen, nitro and C_{1-6} alkyl, (17) C_{3-10} cycloalkyl which may be substituted by 1 to 3 substituents selected form the group consisting of hydroxy, amino, mono- or di-C_{1-4} alkylamino, C_{1-4} alkoxy, halogen, nitro and C_{1-6} alkyl, (18)

C_{2-10} alkenyl which may be substituted by 1 to 3 substituents selected form the group consisting of hydroxy, amino, mono- or di-C_{1-4} alkylamino, C_{1-4} alkoxy, halogen, nitro and C_{1-6} alkyl, (19) C_{7-20} aralkyl which may be substituted by 1 to 3 substituents selected form the group consisting of hydroxy, amino, mono- or di-C_{1-4} alkylamino, C_{1-4} alkoxy, halogen, nitro and C_{1-6} alkyl, (20) amidino and (21) azido;

"substituent(s)" for the "heterocyclic group which may be substituted" or the "heterocyclic group having a bond in a carbon atom thereof which may be substituted" is selected from 1 to 6 of (1) C_{1-6} alkyl, (2) C_{2-6} alkenyl, (3) C_{2-6} alkynyl, (4) C_{3-6} cycloalkyl, (5) C_{5-7} cycloalkenyl, (6) C_{6-10} aryl-C_{1-5} alkyl, (7) C_{6-14} aryl, (8) C_{1-6} alkoxy, (9) C_{6-14} aryloxy, (10) C_{1-6} alkanoyl, (11) C_{6-14} aryl-carbonyl, (12) C_{1-6} alkanoyloxy, (13) C_{6-14} aryl-carbonyloxy, (14) carboxyl, (15) C_{1-6} alkoxy-carbonyl, (16) carbamoyl, (17) N-mono-C_{1-4} alkylcarbamoyl, (18) N,N-di-C_{1-4} alkylcarbamoyl, (19) 3- to 6-membered cyclic aminocarbonyl, (20) halogen, (21) mono-, di- or tri-halogeno-C_{1-4} alkyl, (22) oxo, (23) amidino, (24) imino, (25) amino, (26) mono- or di-C_{1-4} alkylamino, (27) 3- to 6-membered cyclic amino, (28) C_{1-6} alkanoylamino, (29) benzamido, (30) carbamoylamino, (31) N-C_{1-4} alkylcarbamoylamino, (32) N,N-di-C_{1-4} alkylcarbamoylamino, (33) C_{1-3} alkylenedioxy,

(34) $-B(OH)_2$, (35) hydroxy, (36) epoxy, (37) nitro, (38) cyano, (39) mercapto, (40) sulfo, (41) sulfino, (42) phosphono, (43) sulfamoyl, (44) C_{1-6} alkylsulfamoyl, (45) di-C_{1-6} alkylsulfamoyl, (46) C_{1-6} alkylthio, (47) phenylthio, (48) C_{1-6} alkylsulfinyl, (49) phenylsulfinyl, (50) C_{1-6} alkylsulfonyl and (51) phenylsulfonyl; and

"substituent(s)" for the "cyclic amino group which may be substituted" is selected from 1 to 3 of C_{1-6} alkyl, C_{6-14} aryl, phenyl-C_{1-4} alkyl, benzhydryl, C_{1-6} alkyl-carbonyl, C_{6-14} aryl-carbonyl and C_{1-6} alkoxy-carbonyl.

3. A compound of claim 1 or a salt thereof, wherein A is a nitrogen atom.

4. A compound of claim 1 or a salt thereof, wherein B is a nitrogen atom.

5. A compound of claim 1 or a salt thereof, wherein D is a nitrogen atom.

6. A compound of claim 1 or a salt thereof, wherein m is 1.

7. A compound of claim 1 or a salt thereof, wherein R^1 is (1) a C_{1-15} alkyl group which may be substituted, (2) a C_{3-10} cycloalkyl group which may be substituted, (3) a C_{2-10} alkenyl group which may be substituted, (4) a C_{2-10} alkynyl group which may be substituted, (5) a C_{3-10} cycloalkenyl group which may be substituted, (6) a C_{6-14} aryl group which may be substituted, (7) a C_{7-20} aralkyl group which may be substituted, (8) a C_{1-20} acyl group which may be substituted, (9) a nitro group, (10) a group of the

formula: $-NR^{10}R^{11}$ wherein R^{10} is hydrogen, a C_{1-10} hydrocarbon group which may be substituted, a C_{1-20} acyl group which may be substituted, a hydroxy group which may be substituted, a heterocyclic group which may be substituted or a group of the formula: $-S(O)t-R^{12}$ wherein t is an integer from 0 to 2, and R^{12} is hydrogen or a C_{1-10} hydrocarbon group which may be substituted; R^{11} is hydrogen or a C_{1-10} hydrocarbon group; or R^{10} and R^{11} form, taken together with the adjacent nitrogen atom, a cyclic amino group which may be substituted, or (11) a group of the formula: $-O-R^{13}$ wherein R^{13} is hydrogen, a C_{1-10} hydrocarbon group which may be substituted, a C_{1-20} acyl group which may be substituted, a C_{1-20} alkylsulfonyl group which may be substituted, a C_{6-14} arylsulfonyl group which may be substituted, or a heterocyclic group which may be substituted; and R^2 and R^3 each is hydrogen.

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8. A compound of claim 1 or a salt thereof, wherein R^2 and R^3 each is hydrogen.

9. A compound of claim 8 or a salt thereof, wherein the position of R^1 is para-position.

10. A compound of claim 1 or a salt thereof, wherein R^1 is (1) an amino group which may be substituted by (i) carbamoyl which may be substituted by C_{1-6} alkyl or C_{1-6} alkoxy, or (ii) C_{1-6} alkyl-carbonyl, or (2) a C_{1-6} alkoxy group which may be substituted by C_{3-6} cycloalkyl.

11. A compound of claim 1 or a salt thereof, wherein R^4 is a C_{1-15} alkyl group which may be substituted, a C_{3-10} cycloalkyl group which may be

substituted, a C_{2-10} alkenyl group which may be substituted, a C_{2-10} alkynyl group which may be substituted, a C_{3-10} cycloalkenyl group which may be substituted, a C_{6-14} aryl group which may be substituted or a C_{7-20} aralkyl group which may be substituted.

12. A compound of claim 1 or a salt thereof, wherein R^4 is a C_{1-6} alkyl group which may be substituted.

13. A compound of claim 1 or a salt thereof, wherein R^4 is a C_{1-6} alkyl group which may be substituted by halogen, hydroxy which may be substituted or amino which may be substituted.

14. A compound of claim 1 or a salt thereof, wherein R^4 is a group of the formula: $-(CH_2)n-NR^{10}R^{11}$ wherein n is an integer from 1 to 3; R^{10} is hydrogen, a C_{1-10} hydrocarbon group which may be substituted, a C_{1-20} acyl group which may be substituted, a hydroxy group which may be substituted, a heterocyclic group which may be substituted, or a group of the formula: $-S(O)t-R^{12}$ wherein t is an integer from 0 to 2, and R^{12} is hydrogen or a C_{1-10} hydrocarbon group which may be substituted; and R^{11} is hydrogen or a C_{1-10} hydrocarbon group; or R^{10} and R^{11} form, taken together with the adjacent nitrogen atom, a cyclic amino group which may be substituted.

15. A compound of claim 1 or a salt thereof, wherein R^4 is a N-C_{1-6} alkyl-N-benzylaminomethyl group.

16. A compound of claim 1 or a salt thereof, wherein R^5 is hydrogen, halogen, a C_{1-15} alkyl group which may be substituted, a C_{3-10} cycloalkyl group which may be substituted, a C_{2-10} alkenyl group which may be substituted, a C_{2-10} alkynyl group which may be

substituted, a C_{3-10} cycloalkenyl group which may be substituted, a C_{6-14} aryl group which may be substituted, a C_{7-20} aralkyl group which may be substituted, a C_{1-20} acyl group which may be substituted, a carboxy group which may be esterified or amidated, or a group of the formula: $-O-R^{13}$ wherein R^{13} is hydrogen or a C_{1-15} alkyl group which may be substituted, a C_{3-10} cycloalkyl group which may be substituted, a C_{2-10} alkenyl group which may be substituted, a C_{2-10} alkynyl group which may be substituted, a C_{3-10} cycloalkenyl group which may be substituted, a C_{6-14} aryl group which may be substituted, a C_{7-20} aralkyl group which may be substituted, a C_{1-20} acyl group which may be substituted, a C_{1-20} alkylsulfonyl group which may be substituted, a C_{6-14} arylsulfonyl group which may be substituted or a heterocyclic group which may be substituted.

17. A compound of claim 1 or a salt thereof, wherein R^5 is (1) a C_{1-6} alkoxy-carbonyl group, (2) a C_{6-10} aryl group which may be substituted by halogen or C_{1-6} alkoxy, or (3) a phenyl-C_{1-3} alkyl group.

18. A compound of claim 1 or a salt thereof, wherein R^6 is hydrogen, a C_{1-15} alkyl group which may be substituted, a C_{3-10} cycloalkyl group which may be substituted, a C_{2-10} alkenyl group which may be substituted, a C_{2-10} alkynyl group which may be substituted, a C_{3-10} cycloalkenyl group which may be substituted, a C_{6-14} aryl group which may be substituted or a C_{7-20} aralkyl group which may be substituted.

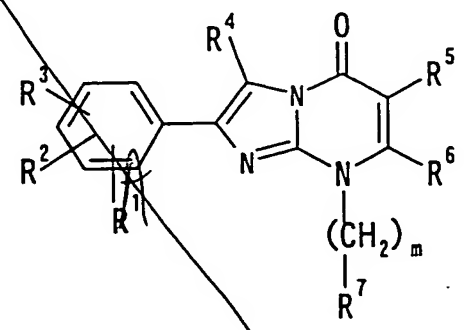
19. A compound of claim 1 or a salt thereof, wherein R^6 is hydrogen or a C_{1-6} alkyl group.

20. A compound of claim 1 or a salt thereof, wherein R^7 is a C_{6-14} aryl group which may be substituted.

21. A compound of claim 1 or a salt thereof, wherein R^7 is a phenyl group which may be substituted by halogen(s).

22. A compound of claim 1 or a salt thereof, wherein one of A and D represents a nitrogen atom and the other represents a carbon atom, or both represent a nitrogen atom; B represents a nitrogen atom or a carbon atom; m represents an integer from 0 to 3; R^1, R^2 and R^3 each represents (i) hydrogen or (ii) a group bound via a carbon atom, a nitrogen atom, an oxygen atom or a sulfur atom; R^4 represents a group bound via a carbon atom; R^5 represents hydrogen or a group bound via a carbon atom or an oxygen atom; R^6 represents hydrogen or a group bound via a carbon atom; R^7 represents a homocyclic group which may be substituted or a heterocyclic group which may be substituted; and each dotted line represents a single bond or a double bond.

23. A compound of claim 1, which is represented by the formula (e):

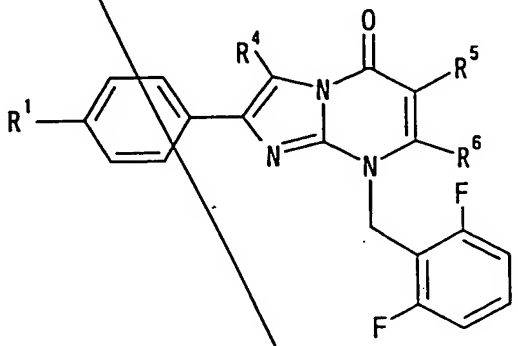


wherein each symbol is as defined in claim 1, or a salt thereof.

24. A compound of claim 23 or a salt thereof,

wherein R^4 is a group of the formula: $-(CH_2)n-NR^{10}R^{11}$ wherein n is an integer from 1 to 3; R^{10} is hydrogen, a C_{1-10} hydrocarbon group which may be substituted, a C_{1-20} acyl group which may be substituted, a hydroxy group which may be substituted, a heterocyclic group which may be substituted, or a group of the formula: $-S(O)t-R^{12}$ wherein t is an integer from 0 to 2, and R^{12} is hydrogen or a C_{1-10} hydrocarbon group which may be substituted; and R^{11} is hydrogen, a C_{1-10} hydrocarbon group or a C_{1-20} acyl group which may be substituted; or R^{10} and R^{11} form, taken together with the adjacent nitrogen atom, a cyclic amino group which may be substituted.

25. A compound of claim 1, which is represented by the formula:



wherein each symbol is as defined in claim 1, or a salt thereof.

26. A compound of claim 25 or a salt thereof, wherein R^1 is (1) an amino group which may be substituted by (i) carbamoyl which may be substituted by C_{1-6} alkyl or C_{1-6} alkoxy, or (ii) C_{1-6} alkyl-carbonyl, or (2) a C_{1-6} alkoxy group which may be substituted by C_{3-6} cycloalkyl;
R^4 is a N-C_{1-6} alkyl-N-benzylaminomethyl group

R^5 is (1) a C_{1-6} alkoxy-carbonyl group, (2) a C_{6-10} aryl group which may be substituted by halogen or C_{1-6} alkoxy, or (3) a phenyl-C_{1-3} alkyl group; and

R^6 is hydrogen.

27. A compound of claim 25 or a salt thereof, wherein R^1 is (1) a nitro group, (2) an amino group which may be substituted by 1 or 2 substituents selected from the group consisting of (i) C_{1-6} alkyl which may be substituted by hydroxy, (ii) C_{1-6} alkyl-carbonyl which may be substituted by hydroxy, halogen or thienyl, (iii) C_{6-10} aryl-carbonyl which may be substituted by C_{1-6} alkyl, C_{1-6} alkoxy or halogen, (iv) C_{3-6} cycloalkyl-carbonyl, (v) C_{2-4} alkenyl-carbonyl, (vi) C_{1-6} alkoxy-carbonyl, (vii) C_{1-6} alkylamino-carbonyl, (viii) C_{1-6} alkoxyamino-carbonyl, (ix) phenylaminocarbonyl, (x) an isoxazolylcarbonyl, thienylcarbonyl, thiazolylcarbonyl, pyrazolylcarbonyl or furylcarbonyl group which may be substituted by 1 or 2 substituents selected from the group consisting of C_{1-6} alkyl, nitro and C_{1-6} alkoxy, (xi) pyridylcarbonyl, (xii) C_{1-6} alkylsulfonyl, (xiii) thienylsulfonyl and (xiv) phenylsulfonyl which may be substituted by C_{1-6} alkyl,

(3) a pyrrolyl group or

(4) a hydroxy group which may be substituted by C_{1-6} alkyl, C_{3-6} cycloalkyl-C_{1-3} alkyl or C_{1-6} alkyl-carbonyl;

R^4 is a C_{1-6} alkyl group which may be substituted

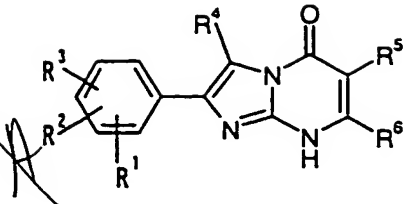
by 1 or 2 substituents selected from the group consisting of (1) halogen, (2) hydroxy and (3) amino which may be substituted by 1 or 2 substituents selected from the group consisting of C_{1-6} alkyl, phenyl-C_{1-3} alkyl and di-C_{1-6} alkylamino-C_{1-3} alkyl;

R^5 is (1) halogen, (2) a phenyl group which may be substituted by halogen or C_{1-6} alkyl, or (3) a carbonyl group substituted by (i) C_{1-6} alkyl, (ii) amino substituted by C_{1-6} alkyl and C_{1-6} alkoxy or (iii) C_{1-6} alkoxy; and

R^6 is hydrogen or a C_{1-3} alkyl group.

28. 8-(2,6-Difluorobenzyl)-5,8-dihydro-2-[4-(ethylaminocarbonylamino)phenyl]-3-(N-methyl-N-benzylaminomethyl)-5-oxoimidazo[1,2-a]pyrimidine-6-carboxylic acid ethyl ester, 8-(2,6-difluorobenzyl)-5,8-dihydro-2-[4-(methoxyaminocarbonylamino)phenyl]-3-(N-methyl-N-benzylaminomethyl)-5-oxoimidazo[1,2-a]pyrimidine-6-carboxylic acid isopropyl ester, 8-(2,6-difluorobenzyl)-5,8-dihydro-2-[4-(ethylaminocarbonylamino)phenyl]-3-(N-methyl-N-benzylaminomethyl)-5-oxoimidazo[1,2-a]pyrimidine-6-carboxylic acid isopropyl ester, or salts thereof.

29. A process for producing a compound of claim 23 or a salt thereof, which comprises reacting a compound of the formula (iv):



wherein each symbol is as defined in claim 23, or a salt thereof, with a compound of the formula: X^2-(CH_2)m-R^7 wherein X^2 is a leaving group; and the other symbols are as defined in claim 23, or a salt thereof.

30. A pharmaceutical composition which comprises a compound of claim 1 or a salt thereof.

31. A composition of claim 30 which is a gonadotropin-releasing hormone antagonist.

32. A composition of claim 30 for preventing and/or treating a sex hormone dependent disease.

33. A composition of claim 30 for preventing and/or treating a sex hormone dependent cancer.

34. A composition of claim 30 for preventing and/or treating prostatic cancer, uterine cancer or breast cancer.

35. A composition of claim 30 for preventing and/or treating prostatic hypertrophy, endometriosis, hysteromyoma or precocious puberty.

36. A composition of claim 30 which is a pregnancy regulator.

37. A composition of claim 30 which is a menstruation cycle regulator.

38. A method for antagonizing gonadotropin-releasing hormone in a mammal in need thereof which comprises administering to said mammal an effective amount of a compound of claim 1 or a salt thereof with a

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pharmaceutically acceptable excipient, carrier or diluent.

39. Use of a compound of claim 1 or a salt thereof for manufacturing a pharmaceutical composition for antagonizing gonadotropin-releasing hormone.

add A4